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|      |         |       |  |

Application/Control No.

10/717,331 Examiner KATO ET AL.

Reexamination

Applicant(s)/Patent under

Art Unit

Jane Rhee

1745

√ Rejected
= Allowed

\_ (Through numeral)
Cancelled

Restricted

Non-Elected

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A Appeal
O Objected

| Cla             | aim      | Date                |                    |  |  |                |  |  | Cla  | Claim Date  |            |       |          |                                     |  |              | $\neg$   | CI              | aim      | Date     |          |          |          |          |          |  |          |            |          |          |          |                |          |
|-----------------|----------|---------------------|--------------------|--|--|----------------|--|--|--|---|------------|-------|----------|-------------------------------------|--|--------------|----------|-----------------|----------|----------|----------|----------|----------|----------|----------|--|----------|------------|----------|----------|----------|----------------|----------|
|                 |          | S                   |                    | Ī  |  |                |  | Π  | Γ  |   |            |       |          |                                     | Γ  | Г            |          |                 | - 1      |          |          | $\neg$   |          |          |          |  |          |            |          |          | $\neg$   |                | $\neg$   |
| <del> </del>    | l a      | $\vdash$            | 1                  |  | 1  | 1              |  |  |  |   |            | ตั    | na       | 1                                   |  |              |          |                 |          |          |          |          | · **     | l a      |          |  |          |            |          |          |          | I              |          |
| Final           | Original | œ.                  | 4                  |  | 1  | 1              |  | 1  |  |   | I. I       | Finat | Original | 1                                   |  | l            |          |                 |          |          |          |          | Fina     | Original |          |  |          |            |          |          |          | Į              |          |
| "               | Ō        | $\overline{\sigma}$ | Ŧ                  |  |  |                | l  |  |  |   | -          | _     | ō        |                                     |  |              |          |                 |          |          |          |          | "        | ō        |          |  |          |            |          |          |          |                | - 1      |
|                 | 1        | H                   | ╁                  | ╁  | $\vdash$   | ┢              | $\vdash$                                     | <del> </del>   | -  |   |            |       | 51       | $\vdash$                            | <del> </del>                                     | -            | $\vdash$ | $\vdash$        |          | $\dashv$ | $\dashv$ | $\dashv$ | -        |          | $\vdash$ | $\vdash$   | $\dashv$ |            |          |          |          |                | $\dashv$ |
| <b> </b>        |          | Υ.                  |                    | +-   | ├—   | $\vdash$       | $\vdash$                                     | $\vdash$   | H  | $\vdash$  |            |       |          | $\vdash$                            | _  | <b> </b>     | $\vdash$ | $\vdash\dashv$  |          |          | -        |          | -        | 101      | $\vdash$ | $\vdash$   | -        | -          | -        |          |          |                |          |
| <u> </u>        | 2        | Н                   | ├                  | ⊢  | ⊢  | ┝              | —  | <u> </u>   |  | <u> </u>  |            |       | 52       | L                                   | ļ  | <u> </u>     | ļ        | Щ               | _        |          | -        | _        | <u> </u> | 102      | _        | $\vdash$   | $\dashv$ |            | _        |          | 4        | _              |          |
| <u> </u>        | -        | 4                   | ┡                  | ┡  | <b>Ļ</b> _                                       | ┞              | ļ  | ↓  |  | <u> </u>  |            |       | 53       | _                                   |  |              |          | Щ               | _        | $\dashv$ | _        | _        | <u> </u> | 103      |          | $\sqcup$   | _        | _          |          |          | _        | _              | _        |
|                 | 4        | Ļ                   | <u> </u>           | ╙  | <u> </u>   | Ļ              | ╙  | <u> </u>   | L  | L   |            |       | 54       | <u> </u>                            |  |              |          | Щ               |          |          |          | _        | L        | 104      |          |  | _        |            |          |          | _        | _              | _        |
|                 | 5        | Y                   | L                  |  |  | L              | <u> </u>                                     | _  | L  | L   |            |       | 55       | L                                   | L  |              |          |                 | _        |          |          | _        |          | 105      |          |  |          |            |          |          |          | _              |          |
|                 | 6        | Ц                   |                    |  | L  |                |  |  |  |   |            |       | 56       | L                                   |  |              |          |                 |          |          |          |          |          | 106      |          |  |          |            |          |          |          |                |          |
|                 | 7        | Ш                   |                    |  |  |                |  |  |  |   | . [        |       | 57       |                                     |  |              |          |                 |          |          |          |          |          | 107      |          |  |          |            |          |          |          |                |          |
|                 | 8        | П.                  |                    |  |  |                |  |  |  |   | . [        |       | 58       |                                     |  |              |          |                 |          |          |          |          |          | 108      |          |  |          |            |          |          | $\Box$   | П              |          |
|                 | 9        | A                   | Γ                  |  |  |                |  |  |  |   | ĺ          |       | 59       | Г                                   |  |              |          |                 |          |          |          |          |          | 109      |          |  |          |            |          |          | $\neg$   |                |          |
|                 | 10       | Π                   | П                  | П  | Г  | П              | П  | <u> </u>   |  |   | .          |       | 60       |                                     |  |              |          | П               |          |          |          |          |          | 110      |          |  |          |            |          |          | $\neg$   | _              |          |
|                 | 11       |                     |                    |  |  |                |  |  |  |   | ·          |       | 61       |                                     |  |              |          |                 |          | ヿ        | T        | _        |          | 111      |          | $\Box$   |          |            |          |          | T        | T              |          |
|                 | 12       | Г                   | 1                  | T  |  |                | 1  |  |  |   |            |       | 62       | Г                                   |  |              |          |                 |          |          |          | $\neg$   |          | 112      | -        |  |          | $\neg$     |          |          | 十        | _              | ┪        |
|                 | 13       | $\vdash$            | $\vdash$           | $\vdash$   | T  | T              | $\vdash$                                     | T  | Т  | Н   |            |       | 63       | 一                                   |  | H            |          | Н               | -        | -        | -        | $\dashv$ |          | 113      |          | $\vdash$   | -        |            | $\dashv$ | $\dashv$ | $\dashv$ | <del>-  </del> | $\dashv$ |
|                 | 14       | H                   | $\vdash$           | -  | Η-   | $\vdash$       | $\vdash$                                     | $\vdash$   | H  | Н   |            |       | 64       | $\vdash$                            | $\vdash$   | $\vdash$     | $\vdash$ | Н               |          | -        | -        | $\dashv$ | -        | 114      | _        | $\vdash \vdash$                                  | $\dashv$ | $\dashv$   | -        | $\dashv$ | $\dashv$ | ┥              | ᅱ        |
|                 | 15       | $\vdash$            | +-                 | +-   | H  | $\vdash$       | $\vdash$                                     | $\vdash$   | H  | -   |            |       | 65       | ╁                                   | $\vdash$   | ├            | -        | $\vdash$        | $\dashv$ | $\dashv$ | $\dashv$ | $\dashv$ | -        | 115      |          | $\vdash$   |          | $\dashv$   | $\dashv$ | -        | $\dashv$ |                | $\dashv$ |
| $\vdash$        | 16       | ┢                   | ├-                 | $\vdash$   |  | $\vdash$       | -  | ├  | $\vdash$   | $\vdash$  |            |       | 66       | -                                   | $\vdash$   | <u> </u>     | $\vdash$ | $\vdash$        | $\dashv$ | $\dashv$ | $\dashv$ | $\dashv$ |          |          | $\vdash$ | $\vdash \vdash$                                  | -        | $\dashv$   | $\vdash$ | $\dashv$ | -+       |                |          |
| <u> </u>        |          | $\vdash$            | $\vdash$           | <del> </del>                                     | $\vdash$   | $\vdash$       | $\vdash$                                     | -  | $\vdash$   | ├   |            |       |          | $\vdash$                            | $\vdash$   | -            |          | -               | _        | -        | $\dashv$ |          |          | 116      | $\vdash$ | $\mapsto$  | -        | $\dashv$   | $\vdash$ |          |          |                |          |
|                 | 17       | -                   | $\vdash$           | $\vdash$   | $\vdash$   | -              | -  | ₩  | _  | $\vdash$  |            |       | 67       | <u> </u>                            | $\vdash$   | <u> </u>     | <b> </b> | Щ               | _        | _        | _        | $\dashv$ | <u> </u> | 117      | Щ        | $\sqcup$   | _        | $\dashv$   |          |          | _        | _              |          |
| $\vdash$        | 18       | $\vdash$            | <b>—</b>           | $\vdash$   | ├-   | <b> </b>       | ↓_   | <del> </del>   |  | ╙   |            |       | 68       | <u> </u>                            | <u> </u>   | L_           | _        | Щ               | _        |          |          | _        | <u> </u> | 118      | L.,      | Ш  |          | _          |          | Щ        | ļ        |                |          |
|                 | 19       | <u> </u>            | <u> </u>           |  | <u> </u>   | <u> </u>       |  | <u> </u>   | L.   | <u> </u>  |            |       | 69       | _                                   | L_   |              |          | Ш               |          |          |          | $\Box$   | <u> </u> | 119      |          |  |          |            |          |          |          | $\sqcup$       |          |
| <u></u>         | 20       | <u>L</u>            |                    | _  | <u> </u>   | L_             |  | _  | $ldsymbol{ldsymbol{ldsymbol{eta}}}$  | $ldsymbol{ld}}}}}}$   | l          |       | 70       |                                     | L  | L            |          | Ш               | _        |          | $\Box$   |          |          | 120      |          |  |          | ]          |          |          |          | [              | ]        |
|                 | 21       |                     |                    |  |  |                | L  | oxdot  | $oldsymbol{ol}}}}}}}}}}}}}}}}}}}}$ | $oldsymbol{ol{ol{ol}}}}}}}}}}}}}}}}}$ | . [        |       | 71       | 乚                                   | L  |              |          |                 |          |          | $\Box$   |          |          | 121      |          |  |          |            |          |          |          | _7             | _]       |
|                 | 22       | $L^{T}$             |                    | L  | L  | L              | L  | Ĺ  | $L^{T}$  |   | ľ          |       | 72       | L                                   | L  |              |          |                 |          | 7        | _7       |          |          | 122      |          |  |          |            |          |          |          |                |          |
|                 | 23       | $L^-$               |                    |  |  | $\Box$         |  |  |  |   |            |       | 73       |                                     |  |              |          | П               |          |          | $\Box$   | 7        |          | 123      |          | $\Box$   |          |            |          |          |          | 一              |          |
|                 | 24       |                     |                    |  |  |                | Π  | Γ  |  |   |            |       | 74       |                                     |  |              | П        | П               |          |          | $\neg$   | $\neg$   |          | 124      |          |  | 一        |            |          |          | $\neg$   |                |          |
|                 | 25       |                     | Π                  | Π  | П  | Π              | Π  | T  | П  |   |            |       | 75       |                                     |  |              |          | П               |          |          | _        | ᅱ        |          | 125      | _        |  | _        | $\neg$     | $\neg$   | $\neg$   | 7        | $\dashv$       | $\neg$   |
|                 | 26       | 1                   |                    | $\vdash$   | $\vdash$   |                | Т  | T  | Г  | Г   |            |       | 76       | T                                   | $\vdash$   | 1            | Ħ        | Н               | $\neg$   |          | $\dashv$ | $\dashv$ | <b>—</b> | 126      | -        |  | $\dashv$ | $\dashv$   | $\neg$   | $\vdash$ | $\dashv$ | $\dashv$       | $\dashv$ |
|                 | 27       | $\vdash$            | $\vdash$           | t  |  | <u> </u>       | $\vdash$                                     | 一  | T  | $\vdash$  |            |       | 77       | ┢                                   | $\vdash$   | $\vdash$     | $\vdash$ | Н               | $\dashv$ |          | $\dashv$ | $\dashv$ |          | 127      |          | $\vdash$   | 7        | $\dashv$   | -        | $\dashv$ | $\dashv$ | ┪              | $\dashv$ |
|                 | 28       | 1                   | t                  | $\vdash$   | <del>                                     </del> | <del>  -</del> | $\vdash$                                     | $\vdash$   | $\vdash$   | $\vdash$  |            |       | 78       | ┢                                   | $\vdash$   | $\vdash$     | $\vdash$ | Н               |          |          | $\dashv$ | $\dashv$ |          | 128      | -        | $\vdash \vdash$                                  | +        | $\dashv$   | -        | $\vdash$ | $\dashv$ | <del>-</del>   | $\dashv$ |
| $\vdash$        | 29       | <del> </del>        | <del>  -</del>     | $\vdash$   | $\vdash$   | +-             | ┢  | +-   | $\vdash$   |   | <b> </b>   |       | 79       | $\vdash$                            | <del> </del>                                     |              | $\vdash$ | Н               | $\dashv$ |          | $\dashv$ | $\dashv$ | -        | 129      | $\vdash$ | $\vdash \vdash$                                  | -        | $\dashv$   | $\dashv$ | $\vdash$ | $\dashv$ | -              | 一        |
| $\vdash$        | 30       | -                   | ┼                  | $\vdash$   | $\vdash$   | ┼              | ├-   | -  | H  | $\vdash$  | -  -       |       | 80       | ├                                   | <del>                                     </del> | <del> </del> | $\vdash$ | Н               | $\dashv$ |          | $\dashv$ | $\dashv$ |          |          | $\vdash$ | $\dashv$   | -        |            | $\dashv$ |          |          |                |          |
| $\vdash$        |          | -                   | ├-                 | ├  | $\vdash$   | $\vdash$       | $\vdash$                                     | <b>-</b>   |  | $\vdash$  | <b>.</b> } |       |          | <u> </u>                            | $\vdash$   |              | $\vdash$ | $\vdash$        | _        |          | $\dashv$ | _        |          | 130      | Ш        | $\dashv$   | $\dashv$ |            | _        | _        | 4        |                |          |
|                 | 31       | $\vdash$            | <del> </del>       | ├—   | $\vdash$   | ├-             | $\vdash$                                     | $\vdash$   | _  | $\vdash$  |            |       | 81       | $\vdash$                            | $\vdash$   | _            | Н        | $\vdash \vdash$ | 4        |          | _        | _        | <u> </u> | 131      | $\sqcup$ | $\sqcup$   | _        | _          |          |          | 4        |                | _        |
| $\vdash$        | 32       | L                   | <u> </u>           | ــــ   | _  | ⊢              | L_   | $\vdash$   | $\vdash$   | Щ   | :          |       | 82       | _                                   |  | L.           | Щ        | Ш               | $\Box$   |          | _        | _        | <u> </u> | 132      | L.,      | $\sqcup$   | ļ        |            |          |          | _        | _              |          |
| $\vdash$        | 33       | <u> </u>            | <b>L</b>           | <u> </u>   |  | L-             | L  | L_   | Ш  |   |            |       | 83       | <u> </u>                            | L.,  |              | Ш        | Ш               |          |          | _        |          |          | 133      |          | $\sqcup$   |          |            |          |          | _        |                |          |
| $\square$       | 34       | <u> </u>            | <u> </u>           | <u>L</u>   | _  | $\perp$        | _  | <u> </u>   | L.,  | Щ   | ļ          |       | 84       | $ldsymbol{ldsymbol{ldsymbol{eta}}}$ | L  | _            | Ш        | Ш               |          | _        |          |          |          | 134      |          | Щ  | _        |            |          |          |          | $\Box$         |          |
| $\Box$          | 35       |                     | <u></u>            | <u></u>  | <u></u>  | 乚              | $ldsymbol{ldsymbol{ldsymbol{ldsymbol{eta}}}$ | Ш  |  |   | [          |       | 85       |                                     |  |              | Ш        | Ш               |          |          |          |          |          | 135      |          |  |          | ]          |          | _]       |          |                | ]        |
| $oxed{oxed}$    | 36       | $oxedsymbol{oxed}$  | $oxedsymbol{oxed}$ | oxdot  | 匚  | L              | L  | $oldsymbol{ol}}}}}}}}}}}}}}}}$ |  |   |            |       | 86       |                                     |  |              |          |                 | _]       | [        | _]       |          |          | 136      |          |  |          | _]         |          |          | J        | ┚              |          |
|                 | 37       | L                   | L                  | L  | L  | L              | L  | $L^{I}$  | $oxedsymbol{oxedsymbol{oxed}}$   |   |            |       | 87       |                                     |  |              |          |                 |          |          | T        |          |          | 137      |          |  | $\Box$   |            |          |          | T        |                |          |
|                 | 38       |                     |                    |  |  |                |  | $\Box$   |  |   |            |       | 88       |                                     |  |              |          |                 |          |          | $\neg$   | $\neg$   |          | 138      |          | $\Box$   | 寸        |            |          | $\neg$   | 寸        |                |          |
|                 | 39       |                     |                    |  |  |                |  |  |  |   | Ī          |       | 89       | Г                                   |  |              | П        |                 |          | ヿ        | 寸        | $\neg$   |          | 139      |          |  | 寸        | $\neg$     |          |          | 寸        | 一              |          |
| $\Box$          | 40       |                     |                    | Г  | Γ  |                |  |  | П  |   | ı          |       | 90       | Г                                   | П  |              | М        | М               | $\dashv$ | 一        | 1        | $\dashv$ |          | 140      | $\neg$   | $\sqcap$   | 7        | $\dashv$   | $\neg$   | $\dashv$ | 7        | $\dashv$       |          |
|                 | 41       |                     |                    | $\vdash$   | T  |                | Г  |  | Н  |   | · þ        |       | 91       | Т                                   |  | -            | $\vdash$ | $\vdash$        | -        | $\dashv$ | $\dashv$ | $\dashv$ |          | 141      | _        | $\vdash$   | $\dashv$ | $\dashv$   | _        | $\dashv$ | -        | -              | $\dashv$ |
| Н               | 42       | $\vdash$            | $\vdash$           | $\vdash$   | $\vdash$   | Г              | $\vdash$                                     | Н  | Н  | Н   | ٠ŀ         |       | 92       | Т                                   | Н  |              | Н        | H               | -        | $\dashv$ | $\dashv$ | $\dashv$ |          | 142      | _        | $\vdash$   | -+       | $\dashv$   |          | $\dashv$ | $\dashv$ | -              | $\dashv$ |
| $\vdash$        | 43       | 1                   | ΙT                 | <del>                                     </del> | ┢  | $\vdash$       | $\vdash$                                     | Н  | Н  | Н   | ŀ          |       | 93       | $\vdash$                            | $\vdash$   |              | $\vdash$ | $\vdash$        |          | $\dashv$ | $\dashv$ | $\dashv$ |          | 143      |          | $\dashv$   | $\dashv$ | $\dashv$   | -        | $\dashv$ | $\dashv$ | -              | $\dashv$ |
| 1               | 44       | $\vdash$            | H                  | $\vdash$   | <del> </del>                                     | ╁              | -  |  | Н  | Н   | :          |       | 94       | <del> </del>                        | Н  | $\vdash$     | Н        | $\vdash$        | $\dashv$ |          | -+       | $\dashv$ |          | 144      |          | <del>                                     </del> | -+       | $\dashv$   |          |          | $\dashv$ |                |          |
| $\vdash$        |          | $\vdash$            | $\vdash$           | <del>  -</del>                                   | <u> </u>   | $\vdash$       | ⊢  | $\vdash$   | Н  | Н   | -          |       |          | $\vdash$                            | $\vdash$   |              | Н        | ${oxed{H}}$     |          |          | $\dashv$ | -        | <u> </u> |          |          | $\vdash$   | -        |            |          |          | $\dashv$ |                |          |
| $\vdash \vdash$ | 45       | -                   | ├-                 | <del> </del> —                                   | $\vdash$   | $\vdash$       | $\vdash$                                     | <b>-</b>   | Щ  | $\vdash$  | -          |       | 95       | $\vdash$                            | Щ.   |              | Щ        | $\vdash \dashv$ | 4        |          |          | _        | <u> </u> | 145      |          | $\vdash \downarrow$                              | -        | _          |          |          | 4        | -              |          |
| $\vdash \vdash$ | 46       | <b> </b>            | ├-                 | <u> </u>   | <u> </u>   | -              | ⊢_   | Щ  | Щ  | Щ   | 1          |       | 96       | $\vdash$                            | L.   | _            | Щ        | Ш               | _        | _        | _        | _        | L        | 146      | -        |  | _        |            |          | _        | 4        | _              | _        |
| $\vdash \vdash$ | 47       | <u> </u>            | L                  | <b> </b>   | _  |                | <u> </u>                                     | Щ  | Ш  | Щ   | ļ          |       | 97       | <u> </u>                            | L.   |              | Ш        | Ш               |          | _        |          |          | <u> </u> | 147      |          |  |          |            |          |          |          |                |          |
| $oxed{oxed}$    | 48       | _                   | <u> </u>           | igspace  |  | <u> </u>       | _  | Ш  | Щ  | Ш   | Į          |       | 98       | _                                   | •  |              | Ш        | Ш               |          |          | $\Box$   |          |          | 148      |          |  |          |            |          |          | $\perp$  |                |          |
| $oxed{oxed}$    | 49       | <u> </u>            |                    | Ш  | Ш  | 匚              |  | $\Box$   | Ш  | Ш   | Į          |       | 99       | oxdot                               |  |              | Ш        |                 |          | $\perp$  |          | _        |          | 149      |          |  |          | $_{\perp}$ | 1        |          |          |                | ]        |
| Ш               | 50       |                     |                    |  |  |                |  |  |  |   |            |       | 100      |                                     |  |              | 1 ]      | ΙĪ              | I        |          | Т        |          |          | 150      |          |  | Ī        | Ī          | _        | 1        | ſ        |                | 1        |